BEFORE THE STATE OF NEW JERSEY
OFFICE OF ADMINISTRATIVE LAW
BOARD OF PUBLIC UTILITIES

I/M/O THE JOINT PETITION OF PUBLIC	**)**
SERVICE ELECTRIC AND GAS COMPANY	**) BPU DKT. NO. EM05020106**
AND EXELON CORPORATION FOR	**) OAL DKT. NO. PUC-1874-05**
APPROVAL OF A CHANGE IN CONTROL	**)**
OF PUBLIC SERVICE ELECTRIC AND GAS	**)**
COMPANY AND RELATED AUTHORIZATIONS	**)**

SURREBUTTAL TESTIMONY OF NANCY BROCKWAY ON BEHALF OF THE NEW JERSEY DIVISION OF THE RATEPAYER ADVOCATE REGARDING SERVICE QUALITY AND RELIABILITY ISSUES

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I/M/O THE JOINT PETITION OF PUBLIC SERVICE ELECTRIC AND GAS COMPANY AND EXELON CORPORATION FOR APPROVAL OF A CHANGE IN CONTROL OF PUBLIC SERVICE ELECTRIC AND GAS COMPANY AND RELATED AUTHORIZATIONS

BPU DOCKET NO. EM05020106

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SURREBUTTAL TESTIMONY OF NANCY BROCKWAY

ON BEHALF OF NEW JERSEY RATEPAYER ADVOCATE

Q. Please state your name, affiliation and address.

A. My name is Nancy Brockway. I am the principal of NBrockway & Associates, 10 Allen Street, Boston, MA 02131.

Q. On whose behalf are you testifying in this proceeding?

A. I am testifying on behalf of the New Jersey Division of the Ratepayer Advocate (Ratepayer Advocate).

Q. Have you previously filed testimony in this proceeding?

A. Yes. On November 14, 2005, I filed Direct Testimony on service quality and reliability issues. On November 28, 2005, I filed Direct Testimony on overall policy issues.

Q. What is the purpose of this Surrebuttal testimony?

A. In this Surrebuttal testimony, I reply to the Rebuttal testimonies of Joint Petitioners' witnesses Ralph Izzo, Denis O'Brien, Ralph LaRossa, Peter Cistaro, Cecil House and Bridget Reidy, concerning my November 14, 2005 Direct Testimony on service quality and reliability issues.

Q. Please summarize your Surrebuttal testimony on these issues.

A. Joint Petitioners spend a great deal of time and testimony reasserting their position that the merger poses no risks to the current level of service quality and reliability experienced by Public Service Electric & Gas Company's (PSE&G) customers. As I stated in my direct testimony, their assertions are debatable, and my Surrebuttal will answer some of the points made in rebuttal to buttress their representations about PSE&G's likely post-merger service quality and reliability. However, Joint Petitioners adamantly resist any suggestion that their representations should be backed up by enforceable standards. Either the Joint Petitioners in fact lack the confidence they profess that PSE&G's performance will not suffer as a result of the merger, or they are unwilling to take the risk that their expectations will not be borne out. It is Joint Petitioners, and not PSE&G consumers, who seek this merger. Accordingly, Joint Petitioners should be willing to stand behind their representations. The Service Quality Maintenance Plan I propose in my Direct Testimony, dated November 14, 2005, sets out a straightforward and reasonable approach to ensuring that, if the proposed merger is approved, either Joint Petitioners' promises are realized, or that Joint Petitioners take the associated risk of non-performance.

As I stated in my Direct Testimony on service quality and reliability, the Joint Petitioners' promises and assertions are not reliable and do not satisfy the positive benefits standard needed to approve the proposed merger. If your Honor and the Board of Public Utilities (Board or BPU) should be inclined to approve the proposed merger, then my recommendations on service quality and reliability need to be adopted to help prevent the decline in performance that could take place post-merger.

The balance of my testimony discusses the particular points Joint Petitioners' Rebuttal witnesses make in support of their views.

Q. Please outline the specific points you will address in this Surrebuttal.

A. First, contrary to the assertions of Joint Petitioners' rebuttal witnesses, the experience of PSE&G's proposed utility merger partners, PECO and Commonwealth Edison (ComEd), after their merger in 2000 does not demonstrate that the merger of PSE&G into Exelon would be free of the risk of reduced quality of service and reliability. Second, despite the Rebuttal testimony of witnesses House and Reidy, there are significant risks attendant upon the proposed decision, forced by the merger, for PSE&G to move to the ComEd Customer Information Management System for customer service, billing and other back-office functions, when it changes its legacy CIS system in the future.

Third, the Joint Petitioners' rebuttal testimony does not allay concerns about the merger of the largest energy utility in New Jersey into a holding company structure where it will be a minority presence, and whose focus on standardization to lower costs will make it more difficult for the Board to chart a New Jersey-specific regulatory path.

Fourth, while the agreement with the Unions restricting PSE&G from contracting out the markout function for five years is welcome, the merger should not be approved absent an unrestricted condition that PSE&G not be permitted to contract out markouts without advance permission from the Board. Finally, the

Service Quality Maintenance Program I propose in my Direct Testimony is a modest and reasonable condition necessary to ensure that, if the merger is approved, PSE&G's service quality and reliability will not be diminished from the standards to which PSE&G now holds itself.

Q. Is there anything in the rebuttal testimonies of Joint Petitioners on issues of service quality or reliability that causes you to change your recommendations on these topics?

A. No. Joint Petitioners have pointed to one or two areas where PSE&G's merger partners can claim an equal or better track record than PSE&G, and in the course of so doing, corrected the record as it stood at the time of my Direct Testimony on November 14, 2005. But the debate over these areas misses the underlying point: if Joint Petitioners have confidence that their promises of equal (or even better) service quality and reliability will materialize, they should have no objection to a Service Quality Maintenance Plan that would put real money behind their words.

The ComEd – PECO Merger Experience Does Not Show That PSE&G Will Maintain or Improve Its Current Level of Performance

Q. Joint Petitioner Witness O'Brien rebuts your concerns about deteriorating reliability at PSE&G post-merger by pointing to the performance of PECO after its merger with ComEd in 2000. Does his rebuttal satisfy the concerns you raise?

A. No. First, Mr. O'Brien raises a red herring, suggesting that the issue before Your Honor and the Board here in New Jersey is whether critics of the ComEd/PECO merger were correct in warning of adverse impacts on service quality as a result of that merger. *See, e.g.*, O'Brien Rebuttal, p. 8, lines 5-7. In any event, PECO's improvement since 2000, the date of the ComEd/PECO merger, came against a history of much worse reliability than PSE&G has achieved. Indeed, despite the improvements in PECO's reliability, its customers still experience significantly more outages, and outages of longer duration, than experienced by PSE&G customers.

Q. Are you saying, as charged by Joint Petitioners' Rebuttal witnesses, that PECO is a "poor performer"?

A. No. However, I am pointing out that PECO's track record, before and after its merger with ComEd, does not provide assurances that PSE&G will maintain its current levels of reliability.

Q. Please provide specific data to support your contention that PECO's reliability before its merger with ComEd was not as good as PSE&G's, and despite improvements in recent years, remains worse than PSE&G's. Please start with average outage duration.

A. Please refer to my Exhibit NB-SQ-10, attached. As can be seen, PECO's CAIDI for the nine years up to and including 2000, the ComEd/PECO merger year, averaged 99 minutes. Post- merger, for the four years from 2001 through 2004, PECO's CAIDI averaged 110 minutes. Thus, after the merger, PECO's average outage duration was actually **longer** than pre-merger. Parenthetically, Mr. O'Brien's discussion at p. 7 of his Rebuttal concludes that PECO has improved post-merger because he truncates his pre-merger analysis to include only 1999 and 2000; 1999 was a particularly poor year for PECO performance, and well outside the pre-merger average. Meanwhile, PSE&G's CAIDI over the fourteen years from 1991 to 2004 has averaged 87 minutes, or less than an hour and a half. For the four years post-ComEd merger, PSE&G was experiencing superior performance, with outage durations averaging 83 minutes, even when 2002 (a year of extra storm activity) is taken into account. By 2004, when PECO was still posting average outage duration numbers over 100 minutes, outages experienced by PSE&G customers were less than 70 minutes long on average.

Q. Please discuss PECO's pre-ComEd merger and post-ComEd merger average frequency of outages per customer.

A. Please refer to my Exhibit NB-SQ-11, attached. From this data we can see that the PECO frequency of outages on average over the nine years leading up to the ComEd merger was just under 1.2. After the merger, the number dropped to between 1.0 and 1.1. Meanwhile, however, PSE&G was maintaining a much lower frequency. For the fourteen years from 1991 through 2004, PSE&G's customers experienced on average about half the frequency of outages as experienced by PECO customers. Even after the ComEd merger and associated PECO improvements, PSE&G's outage frequency was about a third less than PECO's.

Q. Mr. O'Brien (at pp. 7-8 of his Rebuttal) says that ComEd's reliability improved in recent years as well. How do you reply?

A. There are several problems with Mr. O'Brien's suggestion. First, ComEd was forced to make investments to improve its reliability as a result of widespread and lengthy outages in the summer of 1999, a year after Mr. Rowe took over as CEO of ComEd's parent company, Unicom. The outcry from the public, the city of Chicago, and state regulators forced ComEd to take drastic measures to improve its reliability, and quickly. Attached to my testimony as Exhibit NB-SQ-12 is a news report from the summer of 1999 relating the Mayor's concerns and Mr. Rowe's commitment to correct the problem. See also Exhibit NB-SQ-13, a series of press releases from the Illinois Commerce Commission describing the results of a management audit conducted of ComEd's transmission and distribution operations after the 1999 outages.

Second, as with PECO, ComEd has not improved to the point where it matches PSE&G's reliability. Indeed, despite major efforts to address the reliability failures exposed in 1999, ComEd continues to suffer the most frequent and longest outages of the three operating utilities being reviewed in this case. Accordingly, while ComEd has improved its reliability during the post-ComEd/PECO merger years, at the same time improvements were forced upon it, and have not been sufficiently robust to close the performance gap with PSE&G.

Q. Please provide specific examples of the contrast between ComEd and PSE&G, beginning with a description of ComEd's outage duration performance.

A. Referring to my Exhibit NB-SQ-14, this exhibit shows that for the seven years after Mr. Rowe assumed control of ComEd, 1998 through 2004, ComEd customer outages averaged over 2 hours long (129 minutes). The average outage duration for the three years from 1998 through 2000 (when the merger with PECO was approved) was 148 minutes, or almost 2 and a half hours. This figure reflects an extraordinarily high 181 minutes of average outage duration in 1998, the year before the 1999 outages that prompted ComEd's major focus on reliability. For the four years 2001-2004, ComEd's outages averaged a little over 114 minutes long. While much better than before the post-1999 push for greater reliability, it still means that ComEd customers whose power is interrupted are without electricity for almost 2 hours on average. Indeed, in 2003 and 2004, average outage duration in the ComEd service area was over 2 hours (127 minutes and 129 minutes, respectively).

Q. How does this ComEd outage duration performance compare with PSE&G's performance?

A. Despite the efforts to improve reliability at ComEd following the 1999 outage crisis, ComEd's outage duration remains significantly longer on average than that of PSE&G. PSE&G customers experienced outages averaging 89 minutes over the seven years from 1998 through 2004. See Exhibit NB-SQ-14. PSE&G's average outage was 40 minutes (or 30%) shorter than the average outage ComEd's customers experienced during the same period. With regard to outage frequency, the comparison is similar. ComEd's customers have experienced over 1.3 outages per customer per year on average between 1998 and 2004. Exhibit NB-SQ-15. During the same period, PSE&G's customers only experienced 0.6 outages per customer on average over the course of the year. In other words, the PSE&G outage frequency for this seven year period has averaged less than half that of ComEd. Exhibit NB-SQ-15. For all of ComEd's efforts, they are still far behind PSE&G.

Q. Turning to customer service, Mr. House claims that PSE&G's call answering performance has been worse than that of PECO and ComEd. House Rebuttal at p. 8. How do you respond?

A. I agree that my November 14, 2005 testimony incorrectly stated the relationship between PSE&G's call answering performance and that of PECO and ComEd. As Mr. House acknowledges, the reason I had the numbers wrong was that PSE&G provided the wrong numbers. House Rebuttal at 8. Indeed, PSE&G did not correct the record until after I had filed my Direct Testimony on November 14, 2005. See the original response to RAR-SQ-73, and the revised response, November 22, 2005.

Q. Nonetheless, the record now reflects that PSE&G's call answering time for non-emergency calls is not as good as that of PECO or ComEd. Does this cause you to change your view about the benefit to PSE&G of a combination with PECO and ComEd?

A. The fact that ComEd and PECO have better call answering times does allay the concern I initially had, that a merger with them would drag this aspect of PSE&G's customer service down. However, it is by no means clear that a merger with ComEd and PECO is a necessary precondition for improvements in PSE&G's non-emergency call answering performance. As a result, my ultimate conclusion, that the merger is not beneficial for PSE&G's customer service, remains the same.

First, as Mr. House himself testifies, PSE&G has concentrated to a greater degree than its proposed merger partners on first-call response (the resolution of the customer's complaint or concern on the first contact with the Company). House Rebuttal at 9. This difference in the definition of successful call answering performance means that calls will take longer, putting more pressure on call center staff, and inevitably extending the average time to answer non-emergency calls.

Second, and more importantly, as discussed in Mr. Rafferty's Direct Testimony on behalf of Board Staff, PSE&G has already taken steps to correct the staffing problems that were leading to erosion in call center performance, without merging with ComEd and PECO. Rafferty Direct at 13. Third, notwithstanding the call answering deficiencies that have now been brought to our attention, PSE&G has enjoyed low rates of Board complaints compared to other New Jersey utilities, and compared to PECO, as discussed in my Direct Testimony.

Moreover, although the Joint Petitioners assert that "PECO and ComEd's performance is generally higher than PSE&G in the various customer service metrics," Reidy Testimony at p. 3, they conveniently focus on a couple of customer service metrics (call abandonment rate, percentage of calls answered within 30 seconds), where ComEd and PECO appear to exceed PSE&G, while ignoring many other metrics where PSE&G is clearly superior to either Exelon utility. Indeed, the Joint Petitioners do not dispute my direct testimony that PSE&G's service appointments kept rate exceeds both ComEd and PECO, and that PECO's number of complaints per 1000 customers was as much as 5 times higher than that of PSE&G. Brockway Direct Testimony at 25-27. It is hardly black and white, as the Joint Petitioners would have Your Honor and the Board believe, that PECO and ComEd's customer service performance exceeds PSE&G's performance.

PSE&G Should Not Be Forced to Adopt ComEd's CIMS For Business Reasons of Exelon

Q. Please discuss the issue of the decision to adopt ComEd's Customer Information Management System (CIMS).

A. In the rebuttal testimony of witnesses Reidy and House, Joint Petitioners reiterate their intention to migrate PSE&G's billing and customer information data to the Customer Information Management System (CIMS) used by ComEd. Reidy Rebuttal at 11; House Rebuttal at 4. The move to CIMS is scheduled to begin shortly, with PECO being converted by the end of 2006 and PSE&G in 2008. Reidy Rebuttal, p. 11. Joint Petitioners' witnesses assert that significant benefits will accrue to PSE&G and its customers from the conversion to CIMS. Ms. Reidy summarizes these benefits as follows:

> A common customer information and billing system allows the various customer service functions to share integrated processes, practices, procedures and databases while maintaining functionality specific to each Companies' regulations. All employees will be able to work on one system, rather than requiring training, updating and management of three systems. This is much more efficient and cost-effective.

Reidy Rebuttal, pp. 11-12.

Q. Mr. House states in his rebuttal testimony at p. 3 that you were wrong in suggesting that PSE&G does not need to switch away from its present customer information system (CIS). Do you have any comment?

A. The issue here is timing and opportunity, not whether PSE&G should ever move away from the CIS it now uses. First, I should note that it was PSE&G itself that suggested PSE&G need not change customer information systems at this time. As I referenced in my Direct Testimony, PSE&G stated that there are "no known technical or functional limitations that preclude us from retaining CIS for the next 3-5 years," absent the merger and the desire of Exelon to consolidate all billing systems on the same platform. S-OCI-SYN-81. Indeed, PSE&G stated in this discovery response that the major risks it has identified with its current CIS platform are to be considered "beyond the five year horizon." *Id*. Now, after all Direct Testimony has been filed, PSE&G has for the first time asserted business reasons why PSE&G should change its billing platform earlier than 5 years, on the schedule dictated by the standardization desires of its proposed merger parent.

Second, by virtue of Exelon's desires for standardization, and its desire to get maximum use from its investment in the ComEd CIMS platform, the merger will precipitate a decision today to move to the CIMS platform on the early side of the three-to-five year window PSE&G says remains for determining the approach to post-CIS billing and information systems.

Third, as I will discuss further below, it is poor management to determine today that PSE&G will migrate in 2008 to the CIMS platform. To do so will deny

PSE&G the opportunity to consider rapidly emerging new approaches to enterprise software needs.

Q. With regard to the timing of a move away from PSE&G's current system, has PSE&G recently explored the pros and cons of moving to a new billing platform and customer information system?

A. Yes. As noted in S-OCI-SYN-81, in May 2004 PSE&G conducted an eight week study to develop a strategy to replace CIS components over time. However, due to lack of business justification, none of the options was accepted. Mr. House confirms this account in his Rebuttal testimony. Mr. House supplements the earlier data response, noting that:

> In fact, the company has been actively evaluating potential system replacements for the past few years, to understand new functionalities available in the marketplace and the potential customer and operating benefits that could be realized. These evaluations determined that (1) increased efficiencies could be obtained through the installation of a new system that our current system is incapable of providing; and (2) PSE&G could not meet the internal financial hurdles to move forward with a new system at this time.
>
> House Rebuttal, p. 3.

In other words, as of mid-2004, the limitations of CIS were not so serious, in the opinion of PSE&G management, to require the large investment that would be required to move to a different platform. Rather than decide then to make the investment at any particular time in the future, PSE&G management determined to continue to monitor the situation, and to make a firm decision on alternatives closer to the end of CIS' usefulness to the company.

Q. Do the reasons advanced by Mr. House and Ms. Reidy for deciding *now* to move PSE&G to ComEd's billing platform in 2008 make sense absent the merger?

A. To the extent Joint Petitioners' witnesses are saying that in a few years PSE&G would want to change out its legacy customer information system regardless of the merger, I agree. Information technology is constantly and rapidly evolving, and new products and functions come on the market every year. PSE&G's system does not have all the functions that would be available if it were to install a new system today, and many of these functions are beneficial to consumers and potentially save the utility operating costs. However, agreeing with those propositions does not mean I agree that (a) it makes sense to decide today to migrate off PSE&G's current system, nor that (b) the ComEd CIMS system should be chosen today as the platform to which PSE&G will migrate in a few years. But under the merger proposal, and more importantly under the economic imperatives facing Exelon, approving the merger would be a de facto choice in 2006 to move PSE&G to the ComEd CIMS in 2008. Locking in this decision is a mistake for PSE&G customers.

Q. Why does it not make sense to lock PSE&G into the choice of CIMS today?

A. It does not make sense in 2005 or 2006 to lock PSE&G into the choice of CIMS in 2008 because by 2008 it is very possible that there will be widely available, thoroughly vetted, less expensive, and better customer service information platforms than CIMS. The ComEd CIMS itself is already a "legacy" application, installed in 1998, and given rapid developments in the information technology field, it is likely to be obsolete by 2008.

Q. Please explain why CIMS may be obsolete by 2008.

A. CIMS is a "behind-the-firewall" system built by Accenture for ComEd. It is an entire package of database functions and user interfaces, tailored by Accenture to the specific needs of ComEd. The software is built by Accenture, packaged by it, licensed by Accenture to Exelon, installed by Accenture, and maintained by Accenture, on ComEd's servers and system. CIMS is an example of what is called "premises-based" software.

Challenging this paradigm of "premises-based" software is a rapidly growing suite of "hosted" applications, sometimes called "software as a service" or "SaaS." Under this internet-based approach to customer information systems, enterprises pick and choose applications from a menu hosted on the web by the provider. So far, these hosted applications are considered by many early adopters to be less expensive to install and maintain, equally if not more simple for staff to learn, equally if not more convenient for users, equally if not more adaptable to different uses and operating environments, and equally secure as premises-based systems.

Q. Can you state with certainty today that in 2008 hosted applications will be the way PSE&G should go to replace its CIS?

A. No. But I can say that it would be a mistake to ignore the rapid development of SaaS, and the possibility that it will be cheaper and more adaptable for PSE&G (if not also for PECO and ComEd, as well as for other Exelon uses) by 2008. While the advertising-based software is not likely to be suitable for enterprise needs, other developments in hosted software are already making inroads on the premises-based applications. Given the rapid rate of change in the IT world, it is quite possible that by 2008, such internet-based software services may have surpassed legacy systems such as CIMS as the preferred models for enterprises such as PSE&G.

Q. What are some large firms that have already begun using hosted software instead of premises-based/built systems for customer data management?

A. AOL, Bell Canada, Coral Energy, Coldwell Banker Realtors, Dow Jones Newswires, Expedia Corporate Travel, Gateway Computers, GMAC Residential, Time-Warner Cable, and Wyndham International are some enterprises that have begun using hosted software options offered by a marketer of this approach. See www.salesforce.com.

Q. Are there problems that PECO is likely to face with the tailored, premises-based software package Accenture has built for ComEd?

A. Yes. There is a high rate of difficulty with the installation of large new software packages like the Accenture CIMS. Ms. Reidy and Mr. House claim that the experience Exelon had with the ComEd installation in 1998, coupled with the experience they will gain with the PECO adoption of CIMS, will make the migration of PSE&G to the Accenture CIMS less risky. Reidy Rebuttal at p 14, House Rebuttal at 4. However, the experience is not completely transferable, and will not assure the success of CIMS installation at PSE&G.

Q. Why do you say that the experience Exelon has gained and will gain from its implementation of CIMS at ComEd in 1998 and PECO in 2006, respectively, will not assure the success of a CIMS installation at PSE&G?

A. Any integrated package such as CIMS must be taken apart and rebuilt to accommodate differences in application, and this process opens the implementation up to delays, greater expenses, and errors. There are a number of differences that are likely to exist between ComEd's way of interacting with customers and customer data, and that of PECO. PSE&G will have yet a third and different set of protocols and practices – different operator interface protocols, different data definitions, different report requirements (substantively and in terms of timing and format), different data management requirements, and the like. These differences need not be large to be significant from the perspective of software code development. When adapting a premises-based system like the Accenture package, the contractor (Accenture) and the client (Exelon) must first decide which of these changes to incorporate in the system. The alternative is to leave the CIMS software as it is, but that then necessitates a change in how PECO and PSE&G do their business.

Q. Ms. Reidy states in her rebuttal testimony at p.13 that all system improvements require such decisions and potential changes. Is she not correct in implying that you are merely resistant to change?

A. No, she is not. While I agree with her underlying premise, change may bring temporary discomfort, that is a necessary and appropriate price to pay for progress in serving utility customers economically. The question before Your

Honor and the Board, however, is whether Exelon is downplaying (or perhaps does not yet understand) the incremental difficulty of adapting the ComEd system to PECO's needs, and then later to PSE&G's needs (or adapting PECO and later PSE&G to the software's requirements), and whether now is the appropriate time for PSE&G to commit to migrating to the CIMS. What is more important to recall is that the force driving the CIS replacement discussion is the Joint Petitioners' merger proposal, not necessarily what is best for PSE&G's customers when the CIS needs to be replaced.

Implementation of a new software system is expensive, time consuming, and prone to unexpected problems. The commitment to such a change should not be made lightly or in the service of objectives unrelated to the New Jersey utility business (as opposed to the parent corporation's needs). Further, hosted software may offer an approach to replacing legacy systems that is more modular, less expensive, more adaptable to different environments, and otherwise less of an investment for the benefits to be gained.

Q. Are you saying that PSE&G should choose today to adopt a hosted software approach when its present legacy system must be changed out?

A. No. On the contrary, I am making the point that now is not the time to be deciding to switch from PSE&G's CIS system to ComEd's CIMS system, and that facilitating standardization for the benefit of merger partners is specifically not a good enough reason to make the decision. Rather, PSE&G should use the next two or three years to learn more about the alternatives not currently being used by any of the three utilities, and determine what path to take post-CIS with the benefit of such knowledge, and without the pressure of conforming to what may already be an outdated system simply because its merger partners have adopted CIMS.

Q. Why could PSE&G not join in the merger with ComEd and PECO, and yet be allowed by its new parent organization to keep CIS and move to a hosted application or other non-CIMS application?

A. It is conceivable that Exelon will change its mind by 2008 and allow PSE&G to migrate to a better alternative than CIMS. It would even make sense to migrate one of the three operating utilities to the hosted approach, before committing all three to such a move, and it might conceivably make sense to start with PSE&G when its CIS system has become obsolete (although PSE&G should not be a guinea-pig for the benefit of the rest of Exelon's system). However, that is not Exelon's plan. Exelon's plan is for standardization across operating units and for PSE&G to adopt the CIMS system. If PSE&G adopted a different system, standardization would require ComEd to move to that system and risk the loss of any remaining investment in CIMS.

Repeated Assurances By Joint Petitioners Do Not Allay Concerns Regarding the Diminution of PSE&G's Status In a Multi-State/Multi-Enterprise Holding Company

Q. Several witnesses for the Joint Petitioners claim there is no basis for concern about PSE&G's absorption into a larger, multi-state firm. See for example, Izzo Rebuttal at 7, 9-11; LaRossa Rebuttal at 5-6, 8; O'Brien Rebuttal at 3-4,

6, 15-18; Cistaro Rebuttal at 6-7, 9; Reidy Rebuttal at 3-5. Do their arguments cause you to change your view?

A. No. I remain concerned that it will be more difficult for the Board to oversee PSE&G's service quality and reliability once it is part of a large, multi-state holding company structure, with three utilities and a number of other significant non-utility enterprises. Joint Petitioners' Rebuttal witnesses mischaracterize the points I make regarding the change in relations between the utility and the regulator after a merger such as this, and thus do not address or allay the concerns I have raised.

Q. Several Joint Petitioners' witnesses cite the common values of quality service and reliability that the Joint Petitioners assert are shared by Exelon and PSE&G. Why should this alleged culture of excellence not be taken into account by the Board?

A. There are several problems with basing a merger approval on supposed shared values between PSE&G and Exelon. As I have discussed, these alleged shared values have not led Exelon to cause PECO or ComEd to approach PSE&G's level of reliability, for example. Nor does Exelon offer in this docket consistent and enforceable commitments to maintaining the levels of service quality and reliability where PSE&G has achieved them. Rather, Exelon has shifted its ground (sometimes assuring first quartile performance, sometimes only second quartile), has made reference to minimum standards rather than to maintaining (higher) historic levels of performance, and through it all has steadfastly refused to put itself at risk if any set of performance standards are not met.

In addition, Joint Petitioners are coy when they try to claim that cost considerations will never prompt a decision to adopt a performance target a little lower than might otherwise have been maintained by PSE&G. Most of the important decisions will be made in the huge gray area between minimal compliance with regulation on the one hand, and gold-plating of service and reliability on the other. Joint Petitioners would have Your Honor and the Board pretend that consumer and utility interests regarding the level of performance (and associated cost outlays) are always and perfectly congruent. This is nonsense; if it were true, there would be no need for regulation.

Standardization by definition requires some changes for some of the utilities in the group. It is not a charge of bad faith to observe that Exelon will naturally want to be able to make standardization decisions with as little interference from its three utility regulators. All three states will hear the argument that a particular proposed rule or requirement would be more expensive than allowing their utility to follow suit with its merger cohorts. With respect to customer service, in particular, if PSE&G is forced to adopt the ComEd CIMS, the high cost of adapting the customized software to any New Jersey or PSE&G approaches will force Exelon to push hard to allow standardization on the ComEd model. I do not argue that the Illinois way of approaching customer service or reliability is bad. I do assert that there is no benefit and certain risk to New Jersey if a utility becomes subjected to greater pressure than before to conform to operational practices that may not be the preferred approach from the Board's perspective.

The Union Agreement Is a Positive Development
But Do Not Completely Dispose of the Markout Question

Q. Please discuss the issue of markouts.

A. In my Direct Testimony, I stated that there are risks attendant upon using outside contractors to mark out underground facility locations, such as gas mains. I noted that both ComEd and PECO use outside contractors for this function. Accordingly, I recommended in my Direct Testimony at p. 53 that if the merger is to be approved, PSE&G should be required to maintain its markout function in-house, using its own staff. I intentionally did not put any time limit on this condition, as the reasons for using one's own staff for this function are not affected by the passage of time. In Rebuttal, Mr. Cistaro describes the recent settlements PSE&G has achieved with its unions, in which the utility agrees that there are to be no lay-offs and no outsourcing of the markout function through May 2011. Thus, in his words, "there is no issue." Cistaro Rebuttal at p.19. Mr. Cistaro further states that, in any event, the BPU receives quarterly damage reports to monitor PSE&G's performance, and that damage prevention is one of the most scrutinized activities that is monitored and investigated by the BPU. *Id.*

Q. Do you agree with Mr. Cistaro that "there is no issue?"

A. No. The agreement with the unions certainly is reassuring, but it is time-limited. Indeed, it is a five-year agreement, when one considers that the proposed merger may not be consummated, if at all, before May 2006. When Mr. Cistaro turns to the protections New Jersey homes and businesses have that go beyond the term of the union agreement, he points to a regulatory oversight function, the review by the Board of quarterly damage reports, and the catch-phrase of sharing information between utilities. First, the quarterly damage reports are submitted now, so a reference to them does not provide incremental assurance against adverse consequences in the event that, once memories of this merger proceeding have faded, Exelon Energy Delivery decides to move ahead with outsourcing the markout function.

Also, the reliance on regulatory oversight to assuage a risk that is posed by the merger demonstrates a willingness to "lean" on the regulatory structure to protect the public, not a pro-active focus on public safety. The Board has enough responsibility without being a utility's backstop for a less-than-ideal markout approach. Finally, where two out of the three proposed merger partners now use contract labor to perform the markout function, it is reasonable to question whether sharing of knowledge between the companies will more likely produce a decision to outsource, than a decision to retain the markout function in-house. Outsourcing of the markout function is a concern that will endure beyond a five year timeframe. Therefore, the merger should not be approved absent an unrestricted condition that PSE&G will not be permitted to contract out markouts without prior Board approval.

My Proposed Service Quality Maintenance Plan Is Necessary, Proportionate, and Fair

Q. Mr. Izzo, Ms. Reidy, and Mr. Cistaro all complain in their respective rebuttal testimony that your proposed Service Quality Maintenance Plan is unnecessary, onerous, punitive, and out of place in this proceeding. Izzo Rebuttal at 3, Reidy Rebuttal at 10, Cistaro Rebuttal at 17. How do you reply?

A. Joint Petitioners want to have it both ways. They want credit in the merger analysis for their promise to maintain existing levels of service quality and reliability, and yet they are unwilling to be subject to a fair mechanism designed to ensure that PSE&G customers receive the benefit of this promise. If they are unwilling to agree to an enforceable standard set at the levels to which PSE&G holds itself, and which New Jersey has enjoyed, they should not get credit in any form for their repeated assertions that service quality and reliability is at no risk from the merger. This is particularly important because Joint Petitioners want to water down the standard by which their performance should be judged if the merger is approved.

Q. But Mr. Izzo asserts in his rebuttal testimony at p. 4 that you are trying to expand the Board's standard to hold PSE&G to an unreasonably high level of performance, one that has never been adopted by the Board. Is his criticism valid?

A. No. Mr. Izzo mischaracterizes my testimony. I suggest that the Board hold PSE&G to the standards it has set for itself. The point is not to raise the bar above current regulatory standards, nor to set a standard for all New Jersey utilities, but rather to set the bar for the merged entity at least as high as PSE&G has set it for itself historically. According to PSE&G, it measures its staff's performance in part by their success in keeping PSE&G within the first quartile of similarly-situated utilities for service quality and reliability.

Q. Mr. Izzo complains in his rebuttal testimony at pp. 12-13 that a quartile ranking standard does not allow for variation caused by external events. Is he correct?

A. No. On the contrary, quartile ranking implicitly accommodates external factors that affect the utilities in the survey group. Quartile ranking is a standard that includes grading "on the curve." By ranking the utility against other utilities with similar external challenges, it automatically incorporates adjustments that otherwise would need to be made explicitly for weather and other external variations that can affect performance.

Q. Sometimes the Joint Petitioners' witnesses imply that second quartile performance is satisfactory, or that first quartile performance is only a "stretch" goal. Does that change your recommendation?

A. No. First, Joint Petitioners cannot have it both ways. That is, they cannot tout their first quartile performance, point to first quartile performance as the standard to which they set themselves (LaRossa Rebuttal at 8, Reidy Rebuttal at 9-10, Cistaro Rebuttal at 6, O'Brien Rebuttal at 8), and then renounce it when the issue is setting an enforceable standard. Second, in response to RAR-SQ-21, with respect to reliability, Mr. Izzo averred that what can be "guaranteed" is that

"PSE&G will continue to target being among the most reliable utilities in the region (top quartile)…" In response to RAR-SQ-2, Mr. Izzo stated that it is "PSE&G's strategy to be among the most reliability utilities on a regional basis (top quartile) in all aspects of service that matter to our customers." This declaration was followed with a list of metrics, including SAIFI, MAIFI, Gas Leak Response, ACSI Satisfaction Survey, BPU Inquiry Ratio, and CAIDI. Similarly, on Gas Leak Reports Per Mile of Pipe and Damages Per 1000 Locate Requests, PSE&G has set first quartile performance as its goal. RAR-SQ-122. In response to S-DCA-47, PSE&G averred that "PSE&G's overall customer satisfaction strategy is to achieve top quartile performance as compared to its peers." The response to S-DCA-47 goes on to note that PSE&G is "well-positioned in the top quartile in the areas of outage access and information, routine telephone access and customer reputation (as well as many other areas) and just missing the top quartile in the area of telephone contact satisfaction…" See also RAR-GAS-45(C) (scorecard data for PSE&G).

It is inconsistent for the Joint Petitioners to assert repeatedly, as they do, that they plan to keep PSE&G's performance within the first quartile of comparable utility performance, (RAR-SQ-21, and Rebuttal Testimony of Cistaro, p. 6), and then label as "onerous" a requirement that asks exactly that. Third, the idea that top quartile performance will be merely a "stretch" goal is belied by the fact that ComEd and PECO base incentive pay in part on achievement of first quartile results. O'Brien Rebuttal at 15-18, Reidy Rebuttal at 10.

Q. Mr. Izzo states in his rebuttal testimony at pp. 12-13 that you are trying to "legislate performance," that your proposal is "extreme," and that if your proposed standard is accepted, 75% of all utilities would regularly fail to meet the standard and would be continuously penalized. Is he correct?

A. No. Mr. Izzo does not understand my proposal, and his analysis would extend it to situations where it does not apply. The issue here is not the application of the minimum statutory standard, nor the imposition of a standard for general application to all New Jersey utilities, but rather the implementation of a vehicle for providing enforceable assurances to PSE&G customers that their service quality and reliability will not decline as a result of this proposed merger. I am not proposing that the Board adopt a first quartile requirement for all New Jersey utilities. If other utilities subject to the Board's oversight have performance in various measures that falls below first quartile for the regional set of utilities used by PSE&G, that may or may not be a cause for Board concern. However, other New Jersey utilities are not before the Board proposing to merge and promising to maintain first quartile service and reliability standards. Second, I am merely proposing that this particular utility, PSE&G, be required to continue to meet the standard to which it has held itself in recent years. That standard happens to be first quartile performance. Third, to hold PSE&G to its own historic performance standards and its own historic performance (without requiring a significant improvement in performance) as a condition of merger approval can hardly be extreme, particularly where the claimed service quality and reliability benefits of the merger are a linchpin of the case for the merger on the regulated side.

Q. Why is it not enough if, as Mr. Izzo suggests (Izzo Rebuttal at p. 3, lines 16-19), that the Board be able to meet its minimum obligations under the statutes?

A. This merger proposal is not a case in which the objective is to ensure that PSE&G will meet the minimum service and reliability standards set by the Board for all New Jersey utilities. Mr. Izzo's suggestion to the contrary (to the effect that the Board's "net positive benefit" statute means only that the Board be able to meet its own obligations under the statutes) misreads the Board's decision on the standard of care. The Board Order shows that the Board is determined to ensure that PSE&G will strive to improve its performance, and certainly not deteriorate from current levels. Allowing PSE&G post-merger to meet only the bare minimum required of all utilities in the State would allow backsliding in the case of PSE&G for electric reliability and gas operations metrics. Also, the Board has not established statewide standards for many key service quality metrics. As a result, Mr. Izzo's suggestion would render meaningless the Company's stated commitment to maintaining its historic standards of performance. On the other hand, holding the Company to the standards by which it has measured its own performance enforces that goal.

Q. For electric reliability, why would it not be sufficient to require PSE&G to meet the same standards the Board set out in the Interim Regulations?

A. The Interim Regulations set a floor on reliability performance for all utilities, and as such only address minimum standards where they do apply. To declare that PSE&G must meet only the Interim Regulations minimum performance requirements means that PSE&G would be explicitly permitted to allow its reliability to suffer after the merger, and defies the Board's positive benefits prerequisite for merger approval.

Q. Why do you say that setting the post-merger standard for reliability at the level specified in the Interim Regulations would allow PSE&G to lower the reliability of its service from pre-merger levels?

A. PSE&G has routinely exceeded the minimum electric reliability standards set in the Interim Regulations. The minimum standard is set at a historic average (the 10 years from 1990 to 1999), plus two standard deviations. The allowance of two standard deviations from the historic mean provides a very wide range for performance to drop before it is worse than the minimum standard. In PSE&G's case, the benchmark (historic average) for outage durations (CAIDI) under the Interim Regulations was 88 minutes. Adding two standard deviations, as prescribed under the Interim Regulations, allows the minimum performance level to be as long as 114 minutes. That is practically a full half-hour longer in duration than the benchmark.

PSE&G has averaged better than the benchmark (and thus far better than the minimum) in outage duration from 1991 through 2004: 87 minutes. See Exhibit NB-SQ-10. In no single year during this time period was PSE&G's performance at or below the minimum performance level of 114 minutes. Using the regulatory minimum, historic average plus 2 standard deviations, as the test for whether PSE&G has allowed outage duration to deteriorate post-merger would permit PSE&G outage duration performance to slip by almost a third before it was considered “worse” than before the merger. See EXHIBIT NB-SQ-16. Performing the same analysis on outage frequency statistics, we can see that outage frequency could increase by 11% over long-term averages, and still be considered up to historic standards, if the methodology of the Interim Regulations was used to prevent post-merger backsliding in the area of outage frequency. *Id.*

Q. Ms. Reidy in her rebuttal testimony at p. 10 states that you propose “significant automatic penalties to PSE&G and rate reductions for customers if customer service performance declines.” How do you respond to this?

Ms. Reidy mischaracterizes my testimony. As one can see by reference to p. 46 of my Direct Testimony, I recommend the penalty mechanism for only the four key indicators: SAIFI, CAIDI, percent emergency calls answered in 30 seconds, percent emergency calls responded to in one hour or less. I do say that the Board could consider expanding this list, and certainly the Board retains all its existing authority to fashion remedial action as it finds appropriate for substandard performance with regard to other metrics. Ms. Reidy raises a red herring by overstating the application of my proposed penalties.

Q. Ms. Reidy argues in her rebuttal testimony at p. 10 that you are seeking to impose a system of penalties on PSE&G in isolation. Similarly, Mr. Izzo argues in his rebuttal testimony at p. 13 that the topic of reliability standards should be left for the rulemaking process before the Board. Do you agree?

A. No. Once again Ms. Reidy and Mr. Izzo are confusing the purpose of a Service Quality Maintenance Plan in the context of a merger proposal with the implementation of minimum standards for reliability for all New Jersey utilities.

The objective of a Service Quality Maintenance Plan is to create an enforceable means to ensure that PSE&G keeps a key merger promise, improved service quality and reliability, and indeed, does not deteriorate from historic performance levels.

Q. Joint Petitioners argue that the Service Quality Maintenance Plan you propose is tantamount to imposing punitive penalties on PSE&G. Cistaro Rebuttal at 17. Do you agree?

A. No. First, if Joint Petitioners are correct that service quality and reliability will actually improve post-merger, they should have little difficulty maintaining existing levels of performance. Ideally, PSE&G would never come close to incurring a penalty under the Plan, and if the Joint Petitioners' representations are correct, it never will. Second, Joint Petitioners would have Your Honor and the Board have the same confidence in performance level maintenance as they profess, but they are unwilling to back up this asserted confidence with any hard commitment. Rather, they point to the fact that the Board has the ability to enforce service quality and reliability standards. Cistaro Rebuttal at 17. In other words, they argue that the Board should ultimately bear the responsibility for their representations, not them, and that the customers should take the risk of their overconfidence (or over-promising), not them. Finally, Joint Petitioners' rebuttal witnesses uniformly overlook the Plan provisions under which a utility could bring to the Board's attention particular circumstances out of the utility's control that led to a failure to maintain historic service levels.

Q. What do you conclude from your analysis of Joint Petitioners' Rebuttal Testimony?

A. I conclude that Joint Petitioners either lack the confidence in their future service quality and reliability performance that they assert, or are unwilling to back up their claims by taking any concrete risk if their promised results should not materialize. The Joint Petitioners have not demonstrated that the merger should be approved based on a positive benefits standard as it relates to service quality and reliability.

Q. Does this conclude your Surrebuttal Testimony on service quality and reliability?

A. Yes.

Sources: RAR-SQ-9 (PSE&G)
S-ENE-REL-16 (PECO)

PSE&G vs. PECO Average Outage Duration (CAIDI), Pre/Post Unicom/PECO Merger

Year	PECO	PSE&G	PECO Pre/Post Unicom Merger	
1991		75		
1992	82	76	82	
1993	95	71	95	
1994	108	88	108	
1995	111	83	111	
1996	118	89	118	
1997	93	111	93	
1998	135	91	135	
1999	149	106	149	
2000	101	90	**99**	
2001	119	85		119
2002	106	100		106
2003	106	80		106
2004	107	69		107
Averages	**110**	**87**		**110**

Sources: S-ENE-REL-16 (PECO)
RAR-SQ-9 (PSE&G)

PSE&G vs. PECO Average Outage Frequency (SAIFI), Pre/Post Unicom/PECO Merger

			Pre/Post Merger Averages	
Year	PECO	PSE&G	PECO	
1991		0.50		
1992	1.06	0.44	1.06	
1993	1.16	0.51	1.16	
1994	1.52	0.59	1.52	
1995	1.14	0.45	1.14	
1996	1.46	0.56	1.46	
1997	1.03	0.55	1.03	
1998	1.01	0.50	1.01	
1999	1.33	0.56	1.33	
2000	1.03	0.51	1.03	
2001	1.18	0.55	**1.19**	1.18
2002	1.09	0.81		1.09
2003	0.97	0.63		0.97
2004	0.97	0.64		0.97
Averages	**1.15**	**0.56**		**1.05**

Exhibit NB-SQ-12

Available at http://www.cnn.com/US/9908/13/chicago.outage/index.html

Daley unleashes wrath on utility after Chicago blackout

August 13, 1999
Web posted at: 9:02 p.m. EDT (0102 GMT)

CHICAGO (CNN) -- The power may be back on in downtown Chicago, but the furor continues over an outage Thursday that darkened a 30-block area and cost businesses millions of dollars.

Paul McCoy, the vice president in charge of the distribution system for Chicago's electric utility, Commonwealth Edison, resigned Friday in the wake of the latest outage and a blackout in July that left 100,000 people sweltering during a heat wave.

"We are sick and tired of them," said an angry Mayor Richard Daley, who threatened to file a lawsuit against ComEd and demanded that the utility improve and give city officials prior notification of future blackouts.

ComEd officials blamed Thursday's blackout on the failure of cables at a substation. The utility was later forced to expand the outage across a larger area after a transformer at another substation began to overheat.

The blackout hit banks, financial exchanges, retail businesses, office towers and apartment buildings in the middle of the business day. It caused traffic gridlock downtown, forced police headquarters to use emergency generators and interrupted trials at a federal courthouse.

1.1.1 Hotel breaks out Y2K light sticks

At the Chicago Hilton hotel, staff had to break out 4,500 light sticks purchased for Y2K disaster packs.

"This was to be held in a worst case scenario on New Year's Eve, but thank God we had them," said hotel spokesman Robert Allegrini.

The Building Owners and Managers Association of Chicago estimated that the outage cost businesses $100 million.

City officials accused ComEd of ignoring its deteriorating infrastructure.

"We believe there has been a consistent pattern of neglect to the transmission and distribution center at Edison for a period of years now," said Pat Clark of the Citizens Utility Board.

ComEd's chairman, John Rowe, vowed to take steps to improve service. He called his company's performance "absolutely, totally unacceptable."

"A system with proper margin and maintenance should not have this bad luck. The mayor is absolutely right. I'm at least as angry as he is," Rowe said.

However, a company spokeswoman said it is not liable to pay for lost business and spoiled food resulting from the blackout. At least three lawsuits related to the power outage have been filed.

A spokeswoman for Daley said the mayor was still deciding what steps might be taken against ComEd. The city governments of both New York and San Francisco have taken utility companies to court to recover damages suffered by residents in power outages.

Chicago Bureau Chief Jeff Flock, The Associated Press and Reuters contributed to this report.

January 5, 2000

CONSULTANTS FIND EDISON OVERLOADED CABLES LEADING TO POWER FAILURES

The consulting firm hired to investigate Commonwealth Edison Company's power failures in July and August this year, said today that poor maintenance of the electrical system and routine overloading of electric cables led to the failure of the system.

Vantage Consulting, Inc., of Wayne, Pennsylvania, conducted the investigation into the power outages, focusing, particularly, on the equipment that failed, Edison's maintenance of the system and its emergency response to the outages. Walter Drabinski, president of Vantage Consulting, told the Commission Wednesday, that Commonwealth Edison's practice of overloading distribution cables contributed to the equipment failures.

And, he warned, Edison has continued to load electric cables at higher than recommended levels, which could lead to similar breakdowns in the system in the future.

ICC Chairman Richard Mathias said in August the Commission was "most interested in finding the root causes" of the power failures. Vantage concludes that the root cause of the outages was cable failure, due to a heat-induced breakdown of insulation brought on by repeated cable overloading.

Commonwealth Edison apparently "rated the current carrying capacity of its distribution cables higher than the cable manufacturers typically recommend under similar circumstances, and then repeatedly loaded the cables in excess of its own unusually high ratings," according to the consultant's report.

The Vantage report cited poor maintenance of equipment as a contributing factor in the equipment. The report indicated, for example, that Edison failed to clean cooling fins on a transformer at the Jefferson Street substation, and did not repair and return to service the transformers temperature alarm system. Later that transformer was replaced because of problems caused by overheating.

The consultants also concluded that the company caused the failure of an important transformer in the Northwest Substation by closing a circuit breaker without fixing the cable failure that caused the breaker to open. As a result, high current flowed through the transformer into the disabled cable and the transformer was damaged.

The consultant's report also noted that Commonwealth Edison continued to use a type of 1950's vintage insulating sleeve on some cables, even though Edison knew of problems with its reliability. The insulating sleeves were found to be involved in cable joint failures which occurred in July and August last year.

As part of its report to the Commission, Vantage recommended that Edison make a number of improvements to its system, including

- reassessing cable load rating criteria, establishing new, appropriate ratings and operating the system under these constraints;
- reexamine the cable configurations, loading, and sizes for the Northwest Substation to assure that similar overloads do not occur in the future;
- institute a traceable system of communications for maintenance work;
- reassess its policies for rating cables and transformers; and
- modify communications processes and record keeping to minimize problems associated with verbal communications of equipment corrective maintenance requirements.

The cost of the Vantage investigation is estimated at $300,000, and will be paid by Commonwealth Edison. A second and third phase of the investigation, to be conducted by Liberty Consulting Group of Quentin, Pennsylvania, will examine system-wide reliability.

A final report on the system-wide reliability is expected by the end of 2000.

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Available at http://www.icc.illinois.gov/ec/docs/010600edison.doc

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June 8, 2000

LIBERTY CONSULTANTS FIND EDISON UNDERFUNDED MAINTENANCE AND REPAIR OF TRANSMISSION/DISTRIBUTION SYSTEM

Engineers for The Liberty Consulting Group told the Illinois Commerce Commission today that while Commonwealth Edison Company in general had good standards, procedures and people to carry them out, its electrical system failed in summer 1999 because the company had not spent nearly enough money on maintenance and necessary system improvements in prior years.

The Liberty Consulting Group Inc., was hired by the ICC to examine the Commonwealth Edison transmission and distribution systems, as well as the company's standards, policies, procedures and practices as they existed at the time of, and prior to Edison's 1999 power outages.

Liberty's investigation is not directed at summer 1999 outages or at Commonwealth Edison's ongoing system rehabilitation efforts, but rather at the condition of Commonwealth Edison's system and the utility's actions or inaction that set the stage for the decline in its service reliability in recent years.

ICC Chairman Richard Mathias said when the evaluation began the Commission did not know what actions Commonwealth Edison would take to fix its system or the priority of such actions. “We wanted an evaluation of what went wrong as well as a benchmark against which we could measure progress,” he said.

Late last year, the Commission released a report from Vantage Consulting that detailed the circumstances of Commonwealth Edison’s summer 1999 outages in Chicago and surrounding communities, and that the report is available on the Commission’s web site, **http://www.icc.state.il.us**. In a related but separate effort, the Commission staff is monitoring the utility’s progress toward rehabilitating its system as detailed in Edison’s September 15, 1999 report.

Robert Stright, Liberty’s Engagement Director, said that prior to summer 1999 power outages in the Chicago area, Commonwealth Edison Company’s practice was to wait for its distribution system to fail before taking any action to repair or improve it. The consultants found that Edison cut back spending on capital improvements and regular maintenance for its transmission and distribution systems from 1992 to 1998. So strong was the utility’s desire to limit spending, the consultants found, that between 1992 and 1998, Edison spent $225 million less than its cumulative budgeted capital spending for the period, even though customer load continued to grow.

In addition, the consultants found that while Edison’s own substation maintenance work fell further behind schedule in 1998 and early 1999, the utility sold electrical construction and maintenance services to third parties, using its own maintenance staff. In the meantime, the utility’s backlog of maintenance projects and repair work mushroomed.

In its report to the Commission Liberty said that Commonwealth Edison indicated in 1998 that it had budgeted an additional $307 million for service reliability improvements during 1999-2001, but that less than $200 million was actually aimed at improving system reliability. The consultants concluded that the remaining money was budgeted for connections to the utility’s fossil fuel plants and on new connections to independent power producers’ generating plants.

Liberty said that prior to summer 1999, Commonwealth Edison used a 15-year average weather adjustment (a temperature of 93 degrees) for peak-load data in its load forecasts. The result was that Commonwealth Edison’s annual peak loads had a 50 percent chance of exceeding the utility’s forecast. In 1995, as a result of a previous Commission investigation, Failure Analysis Associates recommended to Commonwealth Edison that it change its weather adjustment method by adjusting to 99 degrees instead of 93 degrees. The utility disagreed and made this change only after the summer of 1999. Liberty pointed out that, with the adjustment to 99 degrees, Commonwealth Edison can expect its actual peak load to exceed its forecast about once every 10 years.

The Liberty consultants made 59 recommendations, based on a greater number of findings. Among those recommendations were that Commonwealth Edison should:

- dedicate the necessary funding to maintain and improve reliability of its transmission and distribution system;
- prevent the physical condition of its distribution system from deteriorating to the point it was in the summer of 1999;
- reduce and prioritize the tremendous backlog of maintenance projects;
- justify the way it makes weather adjustments to historical peak electrical loads for its five year load forecasts;
- implement a program to install fuses on all laterals and taps in accordance with standards;
- expand the maintenance testing of cables to include all priority cables;
- de-rate transformers to allow a planning margin that will minimize overloading; and
- relieve overloading on substation transformers and cables on the basis of realistic temperature predictions.

The cost of the Liberty investigation is estimated at $1.6 million, which is to be paid by the utility.

This report is the first of a series from Liberty on Commonwealth Edison's transmission and distribution system problems. Each report will be posted to the ICC website at http://www.icc.state.il.us. A final report is expected by December, 2000.

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Available at http://www.icc.illinois.gov/ec/docs/000608ComEdLibPR.doc

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July 19, 2000

LIBERTY CONSULTANTS CITE EDISON'S
TREE TRIMMING PRACTICES, LACK OF
MANPOWER, IN POWER OUTAGES

The Liberty Consulting Group, which is examining Commonwealth Edison Company's electrical distribution and transmission systems following several major power outages in 1999, today released its second report. The ICC hired Liberty Consulting to review the Commonwealth Edison transmission and distribution systems, as well as the company's standards, policies, procedures and practices at the time of and prior to Edison's 1999 power outages.

Liberty's second report found that, among other shortcomings, the utility's tree trimming programs were inadequate, poorly planned and understaffed. The report states that many of the interruptions of electric service experienced by Commonwealth Edison's customers were caused by trees contacting the utility's distribution facilities and that funding for tree trimming was inadequate; management oversight and tracking of tree trimming progress, inadequate; and tree trimming standards insufficient to assure distribution system reliability. Liberty also concluded that Commonwealth Edison had failed to adopt a recommendation for increased tree trimming from a 1992 audit conducted by Resource Management International for the ICC.

The Liberty consultants' conclusion was that while the utility may have had generally good standards, procedures and people to carry them out, its electrical system failed because the company had not spent nearly enough money on maintenance and necessary system improvements in prior years. Liberty found that Commonwealth Edison set its distribution and transmission staffing levels without reasonable plans or studies regarding the work necessary to assure reliable service. In 1991, the company expected staffing levels to increase during the early and middle 1990s, but staffing during those years, instead, dropped.

Liberty also determined that Commonwealth Edison did not perform the level of distribution system construction, after 1992, that would have been consistent with the age of the utility's equipment and the growth of electric load on the system.

The Liberty consultants added nine new recommendations in their second report to the 59 recommendations contained in their first report. The nine new recommendations say that Commonwealth Edison should:

- develop and implement a comprehensive manpower planning program;
- develop a formal management succession plan;
- evaluate the positions within its organization that have high or low spans of control;
- formalize its tree trimming standards;
- ensure adequate annual funding of their vegetative management program;
- take a more aggressive approach to tree trimming management;
- make a special report on tree trimming each year to the ICC;
- increase its distribution construction to a level necessary to keep up with the distribution conditions and load growth; and
- make several enhancements to its construction management practices.

In its first report to the Commission, released in early June, Liberty evaluated Commonwealth Edison's electric distribution system. This second report concludes Liberty's investigation of the distribution system. Meanwhile, Liberty is well into its investigation of the transmission system and will provide two reports covering the transmission system to the Commission later this year. Both of the completed Liberty Consulting reports are posted on the ICC Internet web site, **http://www.icc.state.il.us.** Printed copies are also available from the Commission.

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Available at http://www.icc.illinois.gov/ec/docs/000717ComEd2PR.doc

Exhibit NB-SQ-14

Sources: S-ENE-REL-16 (ComEd) RAR-SQ-9 (PSE&G)

ComEd vs. PSE&G Reliability
CAIDI – average annual minutes/outage
Before/after ComEd Merger with PECO

	ComEd			PSE&G			
Year	All data	Pre-PECO	Post-PECO	All data	'98-'04	'01-'04	Notes
1991				75			
1992				76			
1993				71			
1994				88			
1995				83			
1996				89			
1997				111			
1998	181	181		91	91		*
1999	142	142		106	106		
2000	121	121		90	90		**
2001	106	**148**	106	85	85	85	
2002	98		98	100	100	100	
2003	127		127	80	80	80	
2004	126		126	69	69	69	
Averages	**129**		**114**	**87**	**89**	**83**	

Notes:
* 3/98 - Rowe becomes CEO
** 11/00 - merger

PSE&G Minimum Requirement Per Interim Regs

Benchmark:	88.27	Average 1990-1999
Minimum:	114.08	Average plus 2 standard deviations

Exhibit NB-SQ-15

RAR-SQ-9 (PSE&G)
S-ENE-REL-16 (ComEd)

Comparison of ComEd to PSE&G Electric Reliability
(SAIFI before/after PECO merger)
(average frequency of outages)

	ComEd			PSE&G			
Year	All data	Pre-PECO	Post-PECO	All data	'98-'04	'01-'04	Notes
1991				0.50			
1992				0.44			
1993				0.51			
1994				0.59			
1995				0.45			
1996				0.56			
1997				0.55			
1998	1.75	1.75		0.50	0.50		*
1999	1.42	1.42		0.56	0.56		
2000	1.30	1.30		0.51	0.51		**
2001	1.29	**1.49**	1.29	0.55	0.55	0.55	
2002	1.01		1.01	0.81	0.81	0.81	
2003	1.14		1.14	0.63	0.63	0.63	
2004	1.16		1.16	0.64	0.64	0.64	
Averages	**1.30**		**1.15**	**0.56**	**0.60**	**0.66**	

Notes:
* 3/98 - John Rowe becomes CEO
** 11/00 - ComEd/PECO merge

PSE&G Minimum Requirement Per Interim Regs

Benchmark	0.52	Average 1990-1999
Minimum	0.62	Benchmark plus 2 standard deviations

Periods	PSE&G/ComEd
'98 - '04	46%
'03 - '04	55%

Exhibit NB-SQ-16

Extent of Slippage in Electricity Reliability
If PSE&G Merger Standard Were Limited to Interim Regulation Minimum

Standard	CAIDI (minutes)	SAIFI (instances)
Average	87	.56
Interim Reg. Minimum	114	.62
Interim Reg. Minimum > Actual	27	.06
% slippage possible	31%	11%